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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,637	01/16/2001	Jay A. Hobson	P5474 US	5516

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GUNNISON MCKAY & HODGSON, LLP  
1900 GARDEN ROAD  
SUITE 220  
MONTEREY, CA 93940

EXAMINER
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SINGH, DALIP K

ART UNIT	PAPER NUMBER
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2676

12

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/760,637

**Applicant(s)**

HOBSON, JAY A.

**Examiner**

Dalip K Singh

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Response to Amendment*

1. This Office Action is in response to applicant's amendment dated March 1, 2004 in response to PTO Office Action dated January 23, 2004. The amendments to claim(s) 1, 3, 4, 9, 11, 13, 14, 18, 19, 21 and 23 have been noted and entered in the record, and applicant's remarks have been carefully considered resulting in the action as set forth herein below.
2. Applicant's arguments filed March 1, 2004 have been fully considered but they are not persuasive.
3. Regarding applicant's argument with respect to claim(s) 1 that "amended claim 1 recites, in part, comparing bitmap itself,..., with bitmaps stored in a cache;...", which Cahoon **suggests** as follows: during a print operation...cache 26 is searched to determine if the requested character is in cache 26...if a match is found...a pointer to character cache 26 is returned...if there is room to put new character...if not make room in...cache 26 for the new character data...col. 3, lines 1-20. Further, Cahoon does address the issue of maintaining font data in bit maps resulting in extremely large memory sizes, and to circumvent this issue, Cahoon's invention keeps font data to be available in bit map form in a cache (col. 1, lines 35-51). Cahoon explicitly discloses font character data being maintained in a cache memory in bit map form, so when an ID is assigned it does assign it to a bitmap and it helps in determining the presence of a character in the cache. Cahoon's anticipation rejection is indeed proper.
4. Regarding applicant's argument with respect to claim 6 that "Linking object modules fails to suggest or disclose anything concerning a cache structure...that "linker" fails to teach anything concerning a linked list or characteristics of a linked list....", the specification on page 5 in lines 5-37 details different embodiments of the instant invention, namely, one embodiment details a unique identifier to a bit map; another embodiment details multiple appearance of an image being stored only once conserving space; use of this unique identifier for retrieval from

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the cache, which Vasilik tries to solve similarly by reducing the number of bitmap files (col. 2, lines 59-64). Cahoon already describes a data structure employed by character caching procedure in a doubly linked character list (col. 3, lines 33-67; col. 4, lines 1-62).

5. Regarding applicant's submission that "typically, a printer is not used to link object modules", Examiner finds this observation lacking in context. The office action of April 11, 2003 is clear in pointing to the anticipated and obviousness type rejection without addressing or even remotely suggesting printer being used to link object modules. Cahoon deals with cache in the realm of bitmap or character cache whereas Vasilik teaches the advantage afforded by encoding the size, position, mask and ID into the actual bitmap resources itself.

6. Regarding applicant's argument with respect to claim 23 that "cache structure is being described and not a file structure", cache structure stores file structure and thus any operations or processing being performed at the cache level corresponds to a file structure being manipulated.

7. Regarding applicant's argument that a cache character record fails to disclose or suggest a two section output file format, Cahoon suggests at printer operation's commencement, the operation system allocating memory and making adjustment for different font sizes which would accommodate width and length element associated with bitmap.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5, 10-15 and 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,592,594 to Cahoon.

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- a. Regarding claims 1 and 11, Cahoon **discloses** a method for retrieving images for display on an output device (printer 10), said method comprising: retrieving a bitmap from a cache (character cache 26) when the bitmap generates a match with an image selected for display on said output device (printer 10) (.. font character data is maintained in a cache memory in bit map form...during a print operation...character cache 26 is searched...if a match is found...a pointer to character cache 26 is returned...col. 1, lines 55-56; col. 3, lines 1-15); and storing in the cache a bitmap representing the selected image, if the selected image does not generate a match with any bitmap stored on the cache (character cache 26) (...if a match is not found...signifying that the character is not in character cache 26...to make room in character cache area 26 for the new character data...col. 3, lines 15-21).
- b. Regarding claims 2 and 12, Cahoon **discloses** wherein: the image selected for display comprises a character associated with a font set (...font character data is maintained...col. 1, lines 55-56).
- c. Regarding claims 3 and 13, Cahoon **discloses** wherein said storing further comprises: assigning a unique identifier (character ID field 40) to a bitmap stored in the cache (character cache 26) (...character data is stored...includes a character ID field 40 which is a unique identifier...col. 2, lines 58-61).
- d. Regarding claims 4 and 14, Cahoon **discloses** wherein said method further comprises: including the unique identifier of a bitmap stored in the cache in a file (character data structure, Figure 2...character data is stored in the form...col. 2, lines 58-65) sent to an output device (printer 10).
- e. Regarding claims 5 and 15, Cahoon **discloses** wherein said method further comprises: retrieving from the cache (character cache 26) the bitmap corresponding to the unique identifier (character ID) in response to a request to display said file on said

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output device (printer 10)(...in response, character cache 26 is searched...by examining...list of character ID structures...a pointer to character cache 26 is returned...indicates...the character record...col. 1-15).

f. Regarding claims 10 and 20, Cahoon **discloses** wherein the output device comprises a printer (printer 10).

g. Regarding claim 21, it is similar in scope to claim 1 above and is rejected under the same rationale (See Figure 1).

h. Regarding claim 22, it is similar in scope to claim 2 above and is rejected under the same rationale.

i. Regarding claim 23, it is similar in scope to claim 4 above and is rejected under the same rationale.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 6-9, 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 5,992,594 to Cahoon in view of U.S. Patent No. 5,515,081 to Vasilik.

a. Regarding claims 6 and 16, Cahoon **does not disclose** wherein: the cache comprises a linked list data structure having length elements. Vasilik **discloses** in the realm of bitmaps being employed for software developments whereby object modules are linked with other object modules similar to the linked list data structure having length elements.. Furthermore, Vasilik **disclose** the advantage of encoding the size, position, mask and ID into the actual bitmap resources itself. Therefore it would have been

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obvious to a person of ordinary skill in the art at the time invention was made to modify Cahoon with the feature "linked list data structure" as taught by Vasilik **because** it allows for changing images without having to alter the program which uses them and also space savings are realized (col. 2, lines 20-33).

b. Regarding claim 7-9 and 17-19, Vasilik **discloses** determining size, position and identity of each image within a multi-image bitmap, size computation from the distance between the brackets, position computed relative to the position of the surrounding brackets similar to elements organized in order of increasing length values, the length value of the bitmap and associating the bitmap with the length element to a length value of the bitmap, and associating the bitmap with a width element corresponding to a width value of the bitmap, wherein the width element is associated with the length element corresponding to the length value of the bitmap. Vasilik thus similarly discloses traversing the linked list data structure when the cache is used for bitmap retrieval. (col. 3, lines 10-36). Therefore, it would have been obvious to a person of ordinary skill in the art at the time invention was made to modify Cahoon with the feature "linked list data structure and search array string" as taught by Vasilik **because** it reduces the workload on the developer's side (col. 9, lines 10-67; col. 10, 1-42).

### ***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Dalip K. Singh** whose telephone number is **(703) 305-3895**. The examiner can normally be reached on Mon-Thu (8:00AM-6:30PM) Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Matthew Bella**, can be reached at **(703) 308-6829**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

**or faxed to:**

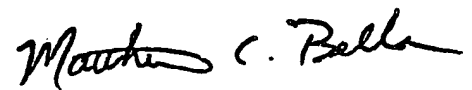
**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding  
should be directed to the Technology Center 2600 Customer Service Office whose telephone  
number is (703) 306-0377.

dks

May 16, 2004



**MATTHEW C. BELLA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600**